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ians. I believe, however, that the point of similarity emphasized by Professor Herdman's proposal, *viz.*, the compactness of the body, is considerably less fundamental than some other characters that might be selected, particularly that of the method of budding. Furthermore, the term "Holosomata" does not apply to these two families any more than it does to Perophora, which genus the author does not, of course, associate with the Botryllidæ and Polystyelidæ.

I would not go so far as Garstang has in relying upon the character of the budding as a basis for classifying the compound ascidians, but I believe that in the present state of our knowledge the most natural grouping of them that can be made is into two sections. One of these would include those in which the buds arise directly from the body of the parent, and the other those in which the budding is from a stolon. The first section might well be called the "Somatoblastica" and the second the "Rhizoblastica." These sections would correspond to Herdman's, with the exception that it would remain for the present an open question as to which one should contain the Didemnidæ, the probabilities being, however, that this family would ultimately find its place among the Somatoblastica.

Those who object to mongrel words will be likely to find fault with "Pectosomata" on etymological grounds.

At the close of the report the author has given a list of all the species of Tunicata thus far known from Australian waters. This list includes 187 species, distributed as follows among the three divisions of the group:

Larvacæa	1 species
Thaliacea	7 species
Asciadiacea	179 species

The work is a very important contribution to the general zoölogical knowledge of this group. Less can be said in favor of the volume from the bookmaker's than from the naturalist's point of view, but it will serve its purpose well, and that is the essential thing.

WM. E. RITTER.

**The Coccidæ of Mauritius.**—M. d'Emmerez de Charmoy has recently published a very interesting account of the Coccidæ of Mauritius, in a pamphlet issued by the Société Amicale Scientifique of that island. As it is probable that this work will not fall into many hands, it may be worth while to give a list of the species,

correcting the nomenclature at the same time, so far as seems necessary :—

- Aspidiotus alæa simplex*, n. var., p. 20.  
*A. articulatus simplex*, n. var., p. 21.  
*A. tesseratus*, n. sp., p. 23.  
*A. maskelli*, Ckll., p. 24.  
*A. cyanophylli*, Sign., p. 24.  
*A. latanieæ*, Sign.  
     = *A. cydoniæ*, p. 25.  
*A. trilobitiformis*, Green, p. 26.  
*Chrysomphalus aonidum*, L.  
     = *A. ficus*, p. 25.  
*C. cladii*, Mask.  
     = *A. cladii*, p. 22.  
*C. aurantii*, Mask.  
     = *A. aurantii*, p. 22.  
*Parlatoria* sp. ?  
     = *P. zizyphi*, p. 27.  
*Diaspis euphorici*, n. sp., p. 28.  
*D. pentagona*, Targ.  
     = *D. amygdali*, p. 29.  
*D. calyptroides cacti*, Comst., p. 29.  
*Howardia biclavis*, Comst.  
     = *Chionaspis biclavis*, p. 30.  
*Chionaspis dilatata*, Green, p. 31.  
*C. sp.* ?  
     = *C. quercus*, p. 30.  
*C. tegulensis*, Zehnt., p. 31.  
*Mytilaspis hibisci*, n. sp., p. 32.  
*M. greeni*, n. sp., p. 33.  
*M. beckii*, Newm.  
     = *M. citricola*, p. 34.  
*M. gloveri*, Pack., p. 35.  
*Fiorinia fioriniæ*, Targ.  
     = *F. camelliæ*, p. 37.  
*F. cockerelli*, n. sp., p. 37.  
*F. alæodendri*, n. sp., p. 36.
- Aonidia* (?) *allaudi*, n. sp.  
     = *F. allaudi*, p. 35.  
*A.* (?) *allaudi galliformens*, n. var.  
     = *F. a. galliformens*, p. 36.  
*Vinsonia stellifera*, Westw., p. 38.  
*Ceroplastes vinsoni*, Sign., p. 38.  
*Lecanium oleæ*, Bern., p. 39.  
*L. hemisphæricum*, Targ., p. 40.  
*L. hemisphæricum filicium*, Boisd., p. 40.  
*L. longulum*, Dougl., p. 40.  
*L. nigrum*, Nietn., p. 40.  
*L. tessellatum*, Sign., p. 40.  
*L. viride*, Green, p. 41.  
*Pulvinaria cariei*, n. sp., p. 41.  
*Asterolecanium bambusæ*, Boisd., p. 42.  
*A. miliaris*, Boisd., p. 42.  
*A. pustulans*, Ckll. ?  
     = *A. quercicola* ?, p. 42.  
*Oudablis* sp. ?  
     = *Phenacoccus nivalis*, p. 42.  
*Dactylopius calceolarie minor*, Mask.,  
     p. 44.  
*D. virgatus*, Ckll., p. 44.  
*D. filamentosus*, Ckll.  
     = *D. vastator*, p. 45 (fide Tinsley).  
*D. sacchari*, Ckll., p. 45.  
*D. citri*, Risso, p. 45.  
*D. longispinus*, Targ.  
     = *D. adonidum*, p. 46.  
     = *D. pteridis*, p. 46.  
*Orthezia insignis*, Dougl., p. 46.  
*Icerya seychellarum*, Westw., p. 47.  
*Chatococcus bambusæ*, Mask.  
     = *Sphaerococcus bambusæ*, p. 48.

Thanks to M. de Charmoy, the writer has been able to examine some of the new species. The *Mytilaspis hibisci*, unfortunately not figured, is close to *M. crawii*, but easily distinguished by the dark scale. The *Aonidia* (?) *allaudi* is a beautiful and singular thing, and could be considered the type of a new genus. *Aspidiotus tesseratus* is not a *Diaspidiotus*, as M. de Charmoy has it, but a *Pseud-aonidia*. Singularly enough, it was found almost simultaneously, by Professor C. H. T. Townsend, at Coatzoocalcos in Mexico, and described by the present writer under a different name, which latter,

now in press, will be withdrawn. The identity of *Dactylopius vastator* with *D. filamentosus* was lately discovered by Professor J. D. Tinsley, who is about to publish an article on the subject. *Euphoria longana*, the plant on which *Diaspis euphorie* was found, is properly a Nephelium.

T. D. A. COCKERELL.

**The Corpora allata of the Orthoptera.** — Heymons describes (*Sitzber. Preuss. Akad. Wiss.*, 1899, Nr. 30) two small bodies, the corpora allata, lying immediately above the œsophagus in the head of *Bacillus rossii*. At first sight they appear as if they were a second pair of pharyngeal ganglia of the sympathetic system, as they lie immediately above the paired visceral nerves. Sections, however, show that, while they lie on these nerves, they are non-nervous in structure. They are vesicular in nature, composed of a single layer of columnar epithelium, the cavity of the vesicle being filled by a stratified chitine, apparently molted by the epithelium. In development these corpora arise as ectodermal ingrowths from the ventral surface, on the boundary between the mandibular and maxillary segments. From these ingrowths a pair of small cell masses, at first solid, bud off and gradually pass dorsally to the definitive position. Concerning the function of these structures, which have been seen in Hymenoptera and other forms by other students, Heymons has little definite to offer. Experiments by extirpation of the structures from living insects showed that they apparently are not organs of equilibration, while the absence of sensory hairs would seem to suggest that they are not sensory in structure. The absence of ducts and of concrements and excretory granules in the protoplasm would militate against a glandular nature. The suggestion is made that they were originally peripheral organs and that, with their migration to an internal position, they have lost their primitive significance.

**Systematic Position of the Fleas.** — Dr. Heymons, in a short paper (*Zool. Anz.*, Bd. XXII, p. 223), gives his opinions upon this mooted question. He claims that Kräpelin's views of the homologies of the mouth parts are erroneous, there existing in all stages a labrum, and a pair each of mandibles and maxillæ, the latter with palpi and a labium. The wounds produced by these animals are not caused by the upper lip, but by the mandibles which are worked by two protractors and two retractors. Anatomical structure goes to show that these forms are to be regarded as forming a distinct order (Siphonaptera), and that Puliciphora, often considered as an annectent form